



E704

JACC March 27, 2012

Volume 59, Issue 13



Arrhythmias

CONTEMPORARY PATTERNS OF PRACTICE AND CHARACTERISTICS OF PATIENTS UNDERGOING DEFIBRILLATION TESTING VERSUS THOSE WHO DO NOT UNDERGO TESTING AT THE TIME OF INITIAL IMPLANTABLE CARDIOVERTER IMPLANTATION: ANALYSIS OF THE NCDR ICD REGISTRY

ACC Moderated Poster Contributions

McCormick Place South, Hall A

Monday, March 26, 2012, 11:00 a.m.-Noon

Session Title: Evaluating and Re-evaluating Implantable Device Practices: Guidelines and Utilization

Abstract Category: 18. Arrhythmias: Devices

Presentation Number: 1242-436

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Background: Advancements in ICD technology have resulted in more effective defibrillation, and the need for defibrillation threshold (DFT) testing has been questioned. The aim of the current study is to identify contemporary patterns of practice related to DFT testing and to compare characteristics of pts who undergo testing versus those who do not.

Methods: 64,227 initial ICD implant procedures performed at 1261 facilities (April 2010 to December 2010) in the NCDR ICD Registry were selected to identify patterns of practice related to DFT testing. Pt and hospital characteristics were compared using chi-square test for categorical variables and unbalanced T-test for continuous variables.

Results: DFT testing was not performed in 29% of pts. Pts who did not undergo testing were older, more often had heart failure (& higher functional class), lower LVEF, atrial arrhythmias, a primary prevention indication, and were undergoing CRT implant. Pts who did not undergo testing were less likely implanted in a metropolitan area and more likely implanted at a teaching hospital in New England or Mid Atlantic U.S.

Conclusions: Although clinical trials documenting the efficacy of ICDs all included some form of DFT testing, testing is not performed in many (29%) pts. Pts who undergo testing differ from those who don't with respect to baseline characteristics, ICD type and indication, with regional variation by hospital type and location. Prospective randomized data are needed to determine the impact of DFT testing on outcome.

| | No DFT Testing | DFT testing | P value |
|----------------------------------|----------------|-------------|---------|
| Age, years (mean) | 67.4 | 65.1 | <0.001 |
| Heart failure | 83% | 77% | <0.001 |
| NYHA Functional Class III & IV | 59% | 50% | <0.001 |
| Nonischemic dilated CM | 47% | 35% | <0.001 |
| Atrial fibrillation/flutter | 44% | 27% | <0.001 |
| LVEF (%) | 27.5% | 29.3% | <0.001 |
| Indication: Primary prevention | 83% | 81% | <0.001 |
| Device type: CRT | 43% | 36% | <0.001 |
| New England or Mid Atlantic U.S. | 21% | 15% | <0.001 |